

Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	09/494,282		
		Filing Date	January 18, 2000		
		First Named Inventor	Sergey A. Selifonov		
		Group Art Unit	1631		
		Examiner Name	Zhou S.		
		Attorney Docket Number	02-028930US		

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code (if known)		
AB	AA	6,188,965	B1	Mayo et al. 702/19	02-13-2001
AB	AB	6,269,312	B1	Mayo et al. 702/19	07-31-2001

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Examiner Initials	Cite No.	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Office	Number	Kind Code (if known)	
AB	AC	WO	00/23564	A2	Xencor, Inc 04-27-2000

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
AB	AD	CHAMBERLAIN ET AL. (1990) "Multiplex PCR for the Diagnosis of Duchenne Muscular Dystrophy." <i>PCR Protocols</i> 272-281.			
AB	AE	HAYASHI ET AL. (1994) "Simultaneous Mutagenesis of Antibody CDR Regions by Overlap Extension and PCR." <i>BioTechniques</i> 17(2):310-315.			
AB	AF	JIRHOLT ET AL. (1998) "Exploiting sequence space: shuffling in vivo formed complementarity determining regions into a master framework." <i>Gene</i> 215:471-476.			
AB	AG	KOBAYASHI ET AL (1997) "Analysis of Assembly of Synthetic Antibody Fragments: Expression of Functional scFv with Predefined Specificity." <i>BioTechniques</i> 23(3):500-503.			
AB	AH	PRODROMOU ET AL (1992) "Recursive PCR: a novel technique for total gene synthesis." <i>Protein Engineering</i> 5(8):827-829.			
AB	AI	SODERLIND ET AL.(1999) "Complementarity-determining region (CDR) implantation: a theme or recombination." <i>Immunotherapy</i> 4:279-285.			
AB	AJ	SODERLIND ET AL.(2000) "Recombinant germline-derived CDR sequences for creating diverse single-framework antibody libraries." <i>Nature Biotechnology</i> 18:852-856.			
AB	AK	SODERLIND ET AL. (1995) "Domain libraries: Synthetic diversity for de novo design of antibody V-regions." <i>Gene</i> 160:269-272.			

Examiner Signature	<i>Zhou</i>	Date Considered	11/13/00
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Substitute for form 1449A-B/PTO Information Disclosure Statement by Applicant JUN 08 2001 Use as many sheets as necessary)		Complete if Known		
		Application Number	09/494,282	
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		Group Art Unit	Zhou S.	
		Examiner Name	1631	
		Attorney Docket Number	02-028930US	

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Column(s), Lines Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
PL	AA	4,959,312		Sirokin	09-25-1990	
PL	AB	4,994,379		Chang	02-19-1991	
PL	AC	5,043,272		Hartly et al.	08-27-1991	
PL	AD	5,264,563		Huse	11-23-1993	
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PL	AJ	5,612,205		Kay et al.	03-18-1997	
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PL	AV	6,096,548		Stemmer	08-01-2000	
PL	AW	6,117,679		Stemmer	09-12-2000	
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PL	AY	6,153,410		Arnold et al.	11-28-2000	
PL	AZ	6,159,690		Borrebaeck et al.	12-12-2000	
PL	BA	5,675,253		Smith et al.	10-07-1997	

Examiner Signature *Shortle* Date Considered 11/13/01

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Substitute for form 1449A-B/PTO		Complete if Known	
O I P INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	09/494,282
JUN 08 2001 (use as many sheets as necessary)		Filing Date	January 18, 2000
		First Named Inventor	Sergey A. Selifonov
		Group Art Unit	Zhou S.
		Examiner Name	1631
		Attorney Docket Number	02-028930US

BV	COLE-STRAUSS ET AL. "Correction of the Mutation Responsible for Sickle Cell Anemia by an RNA-DNA Oligonucleotide." <i>Science</i> 1386-1389 (1996)	
BW	DALE ET AL. "Oligonucleotide-directed Random Mutagenesis Using the Phosphorothioate Method." <i>Methods Mol. Biol.</i> 57:369-374 (1996)	
BX	DELAGRAVE "Searching Sequence Space to Engineer Proteins: Exponential Ensemble Mutagenesis." <i>Biotechnology (N Y)</i> . 1993 Dec;11(13):1548-52.	
BY	DELAGRAVE "Recursive ensemble mutagenesis." <i>Protein Eng.</i> 1993 Apr;6(3):327-31.	
BZ	DELAGRAVE "Context dependence of phenotype prediction and diversity in combinatorial mutagenesis." <i>Protein Eng.</i> 1995 Mar;8(3):237-42.	
CA	Egea Biosciences, Inc. "Pathway to the Proteome"	
CB	FODOR ET AL. "Light-Directed, Spatially Addressable Parallel Chemical Synthesis." <i>Science</i> 251:767-777 (1991)	
CC	FODOR "Genome Analysis: Genome Technology." <i>FASEB Journal</i> 11:121 (1997)	
CD	FODOR "Massively Parallel Genomics." <i>Science</i> 227:393-395 (1997)	
CE	GOLDMAN "Algorithmically Optimized Combinatorial Library Screened by Digital Imaging Spectroscopy." <i>Biotechnology (N Y)</i> . 1992 Dec;10(12):1557-61.	
CF	HILL ET AL. "The structure of granulocyte-colony-stimulating factor and its relationship to other growth factors." <i>PNAS</i> 90:5167 (1993)	
CG	KACZOROWSKI ET AL. "Co-operatively of hexamer ligation." <i>Gene</i> 179(1):189-193 (1996)	
CH	KARLIN ET AL. "Applications and statistics for multiple high-scoring segments in molecular sequences." <i>PNAS USA</i> 90:5873-5787 (1993)	
CI	KAYUSHIN ET AL. "A convenient approach to the synthesis of trinucleotide phosphoroamidites-synthons for the generation of oligonucleotide/peptide libraries." <i>Nucleic Acids Res.</i> 24:3748-3755 (1996)	
CJ	KREN ET AL. "Targeted Nucleotide Exchange in the Alkaline Phosphates Gene of HuH-7 Cells Mediated by a Chimeric RNA/DNA Oligonucleotide." <i>Hepatology</i> 25(6):1462-1468 (1997)	
CK	KREN ET AL. "In Vivo site-directed mutagenesis of the factor IX gene by chimeric RNA/DNA oligonucleotides." <i>Nature Medicine</i> 4(3):285-290 (1998)	
CL	KUNKEL "The Efficiency of Oligonucleotide-Directed Mutagenesis." <i>Nucleic Acids & Mol. Biol</i> (1997)	
CM	LING ET AL. "Approaches to DNA Mutagenesis: An Overview." <i>Anal Biochem.</i> 254(2):157-178 (1997)	
CN	MEHLING ET AL. "Nucleotide sequences of streptomycete 16S ribosomal DNA: towards a specific identification system for streptomycetes using PCR." <i>Microbiology</i> 141:2139-2147 (1995)	
CO	MINTZ ET AL. "EHD1-An EH-Domain-Containing Protein with a Specific Expression Pattern." <i>Genomics</i> 59(1):66-76 (1999)	
CP	MUERHOFF ET AL. "Identification of conserved nucleotide sequences within the GB virus c 5'-untranslated region: Design of PCR primers for detection of viral RNA." <i>J. Virological Methods</i> 62:55-62 (1996)	

Examiner Signature		Date Considered
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Substitute for form 1449A-B/PTO		Complete if Known	
CONFIDENTIALITY INFORMATION DISCLOSURE STATEMENT BY APPLICANT <small>JUN 08 2001 (use as many sheets as necessary)</small>		Application Number	09/494,282
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		Group Art Unit	Zhou S.
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		Attorney Docket Number	02-028930US

<i>C</i>	CQ	NAKAMAYE ET AL. "Inhibition of restriction endonuclease Nci I Cleavage by phosphorothioate groups and its applications to oligonucleotide-directed mutagenesis." <i>Nucleic Acids. Res.</i> 14:9679-9698 (1986)	
<i>C</i>	CR	NEEDLEMAN ET AL. "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins." <i>J. Mol. Biol.</i> 48:443 (1970)	
<i>C</i>	CS	PATHY "Modular exchange principles in proteins." <i>Curr Opinion in Structural Biology</i> 1:351-361 (1991)	
<i>C</i>	CT	PATHY "Introns and exons." <i>Curr. Opinion in Structural Biology</i> 4:383-392 (1994)	
<i>C</i>	CU	PEARSON ET AL. "Improved tools for biological sequence comparison." <i>PNAS</i> 85:2444 (1988)	
<i>C</i>	CV	PORTER ET AL. "Direct PCR Sequencing with boronated Nucleotides." <i>Nucleic Acids Res.</i> 25(8):1611-1617 (1997)	
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<i>C</i>	CX	SAYERS ET AL. "5'-3' Exonucleases in phosphorothioate-baised oligonucleotide-directed mutagenesis." <i>Nucleic Acids Res.</i> 16:791-802(1988)	
<i>C</i>	CY	SAYERS ET AL. "Strand specific cleavage of phosphorothioate-containing DNA by reaction with restriction endonucleases in the presence of ethidium bromide." <i>Nucleic Acids Res.</i> 16:803-814 (1988)	
<i>C</i>	CZ	SMITH "In Vitro Mutagenesis." <i>Ann. Rev. Genet.</i> 19:423-462 (1985)	
<i>C</i>	DA	SMITH ET AL. "Comparison of Biosequences." <i>Adv. Appl. Math</i> 2:482 (1981)	
<i>C</i>	DB	STRAUSS "The Site-Specific Correction of Genetic Defects." <i>Nature Medicine</i> 4:274-275 (1998)	
<i>C</i>	DC	TAYLOR ET AL. "The use of phosphorothioate-modified DNA in restriction enzyme reactions to prepare nicked DNA." <i>Nucleic Acids Res.</i> 13:8749-8764 (1985)	
<i>C</i>	DD	TAYLOR ET AL. "The rapid generation of oligonucleotide-directed mutations at high frequency using phosphorothioate-modified DNA." <i>Nucleic Acids Res.</i> 13:8765-8787 (1985)	
<i>C</i>	DE	VIRNEKAS ET AL. "Trinucleotide phosphoramidites: ideal reagents for the synthesis of mixed oligonucleotides for random mutagenesis." <i>Nucleic Acids Res.</i> 22:5600-5607 (1994)	
<i>C</i>	DF	VON DER OSTEN ET AL. "Protein engineering of subtilisins to improve stability in detergent formulations." <i>J. Biotechnol.</i> 28:55-68 (1993)	
<i>C</i>	DG	WELLS "Importance of hydrogen-bond formation in stabilizing the transition state of subtilisin." <i>Trans. R. Soc. Lond.</i> A317:415-423 (1986)	
<i>C</i>	DH	WHIPPLE ET AL. "Application of Genetic Algorithms to Combinatorial Synthesis: A Computational Approach to Lead Identification and Lead Optimization." <i>J. AM. Chem Soc.</i> 118:1669-1676 (1996)	
<i>C</i>	DI	XIANG ET AL. "Targeted gene conversion in a mammalian CD34+-enriched cell population using a chimeric RNA/DNA oligonucleotide." <i>J. Mol. Med.</i> 75:829-835 (1997)	
<i>C</i>	DJ	YOON ET AL. "Targeted gene correction of episomal DNA in mammalian cells mediated by a chimeric RNA-DNA oligonucleotide." <i>PNAS</i> 93:2071-2076 (1996)	
<i>C</i>	DK	YOKOMORI ET AL. "A Similarity measure for DNA sequence analysis based on locality." <i>Genome Inf. Ser.</i> 4:283-292 (1993)	

Examiner Signature	<i>Shafikov</i>	Date Considered	11/13/01
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<i>R</i>	DL	YOUNG ET AL. "Characterization of the Receptor binding determinants of granulocyte colony stimulating factor." <i>Protein Science</i> 6:1228-1236 (1997)	
<i>AS</i>	DM	YOUVAN "Imaging Sequence Space." <i>Nature</i> . 1994 May 5;369(6475):79-80.	
<i>RV</i>	DN	ZOLLER "New recombinant DNA methodology for protein engineering." <i>Curr. Opinion in Biotechnology</i> 3:348-354 (1992)	

Examiner Signature	<i>Shaffer</i>	Date Considered	<i>11/13/91</i>
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<i>BB</i>	BB	5,650,722		Smith et al.	07-22-1997	
<i>BC</i>	BC	5,519,319		Smith et al.	05-21-1996	
<i>BD</i>	BD	5,408,181		Dechene et al.	04-18-1995	
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Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
<i>BF</i>	BF	WO	00/00632		Phylos, Inc.	01-06-2000		
<i>BG</i>	BG	WO	00/37684		KIRS & FELDER	06-29-2000		
<i>BH</i>	BH	WO	00/53744		Diversa Corporation	09-14-2000		
<i>BI</i>	BI	WO	00/58517		Diversa Corporation	10-05-2000		
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<i>BK</i>	BK	WO	97/33957		Amway Corporation	09-18-1997		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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<i>BL</i>	BL	ALEXEEV ET AL. "Stable and Inheritable changes in genotype and phenotype of albino melanocytes induced by an RNA-DNA oligonucleotide." <i>Nature Biotechnology</i> 13:43-1346 (1998)	
<i>BM</i>	BM	ALBERTS ET AL. "Recombinant DNA Technology." <i>New York Publishing, Inc.</i> 291-312 (1994)	
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<i>BS</i>	BS	CARTER "Improved Oligonucleotide-Directed Mutagenesis Using M13 Vectors." <i>Methods in Enzymol</i> 154:382-403 (1987)	
<i>BT</i>	BT	CARTER "Improved oligonucleotide site-directed mutagenesis using M13 vectors." <i>Nucleic Acids Res.</i> 13:4431-4443 (1985)	
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Examiner Signature	<i>S. Zhou</i>	Date Considered	<i>10/13/99</i>
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		Number	Kind Code (if known)		
	AA	5,066,584		Gyllensten et al.	11/19/1991
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FOREIGN PATENT DOCUMENTS

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